results of some experiments which may seem more significant to the writer than they would to a physicist. Up to the time Bigelow and Hunter's paper was published, at least, the literature did not seem to cover the point at all satisfactorily, yet many statements and implications seem to be clear. Ramsay and Shield's classic determinations of surface tension based upon capillary rise may be cited as an example. If capillary rise is affected by the nature of the tube, their results would apparently be invalidated.

Do not three substances ordinarily play parts in capillarity, and does not the result depend on the identity of each of the substances? If water, air and glass are the substances, the water heaps up against the glass, and if the tube is of hair-like diameter there is a rise of water. Is not this due to the fact that where water, air and glass come together molecules of water are drawn toward the glass much more than toward molecules of air or other molecules of water?

The mechanics of this process seem simple, whereas it is difficult to conceive how the raising of the liquid can be a product of its surface tension alone,[4] even though the walls of the tube above the liquid have a contractile coating of adsorbed liquid or a membranous extension of the liquid in the tube.

The writer is particularly interested in the part that capillarity or differences in intermolecular attractions may play in oil and gas accumulation. In the vicinity of oil and gas pools which occupy the pores of rocks in the earth, water with various quantities of salt in solution, oil of one or more kinds, natural gas and perhaps air are in contact with each other and with various minerals. Oil and gas are found in relatively large-pored rocks, in pools which show some similarity in shape and the pressure upon them is usually several hundred pounds to the square inch. The pressure on some pools is greater than that which would be exerted by a column of water extending to the surface. May not these features be explained in considerable part by differences in intermolecular attractions?

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[4] Washburne, C. W., "The Capillary Concentration of Gas and Oil," *Am. Inst. Min. Eng. Trans.*, Vol. 50, p. 830, 1915.

SYNCHRONOUS RHYTHMIC MOVEMENTS OF FALL WEB-WORM LARVÆ

RECENT discussion in SCIENCE of synchronous actions of certain animals, notably, flashing of fireflies, brings to mind a habit of the larvæ of the fall web-worm (*Hyphantria cunea*), which seems to be of the same nature. Whether it has been noted in the literature or not I am unable to say; probably it has, as it is of common occurrence. In any event a short account of the habit may not be out of place in this connection.

Fall web-worm larvæ, scattered over the outside of the web, may be seen, at intervals of from three to five minutes, to start a sharp rhythmic swaying from side to side, accomplished by raising the anterior half of the body to a semi-erect position, then moving it quickly, first to one side then to the other, through an angle of about ninety degrees. The movement is started by a few of the larvæ, but in a few seconds all the individuals in the colony will be moving in the same manner and in perfect unison. I do not have my notes at hand but, as I remember it, the movements were at the rate of about forty per minute and continued each time for from forty-five seconds to more than a minute. Even more suddenly than they start, the movements cease.

What the cause is for this strange habit is a puzzle. It seems to have nothing to do with spinning the web. Artificial stimuli failed to start them before the end of the resting interval although various means were tried. These included sounds, both musical and otherwise, made with various instruments, smoke and strong chemical odors, jarring and several other devices which suggested themselves at the time. Equally futile were attempts to stop the movements.

There seemed to be no leader, the swaying starting one time in one part of the colony or even in several parts at once, and again in

[5] Published by permission of the director, U. S. Geological Survey.

some other part. Invariably, however, all would join in.

This habit was first observed by me several years ago, just how long I do not remember. It is associated with my earliest recollections of the insect. I have made more or less careful observation of it and taken notes several times, the first time in 1912. I do not think that I ever saw a colony that did not have the habit and I have had them in the laboratory every summer for several years. Observations of the habit may be made on colonies confined in the breeding cage or on those in the natural conditions. There seems to be no difference.

There is no doubt in my mind that this habit is an excellent example of synchronous rhythmic motion, not occasional or accidental, but habitual with the species. It may be well added to Mr. Craig's single, more or less doubtful, example, that of the chirping of crickets.

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THE POPULAR NAMES OF NORTH AMERICAN PLANTS

An article under this title in Science for February 2, by J. Adams, opens a question which has interested the present writer partly for the same reasons as there given, and he has passed through various stages of mental attitude toward it.

A notable fact is that common names when once established are apparently more stable than the scientific names. The names of birds furnish a good example of this, very few common names having been changed in the last fifteen years while a fourth or more of the scientific names have been changed, and some of them two or three times. However, the number of species of seed plants is about ten times as great as that of birds.

This very stability indicates difficulty in establishing common names where none exist. Names are a result of necessary "handles," and the greater part of those species which have not received them are not regarded frequently enough to establish names. The essential qualities of a name would seem to be significance and simplicity. The use of qualifying adjectives should be avoided as far as possible. The writer is not certain that a species must bear the same name in different regions, or that different species may not have the same one inasmuch as a name which is appropriate in one place may not be in another, and similar species often occupy similar places in different regions. The writer places much value on local lists, keys, etc., including a single state or natural area. This restricts the number of species involved and simplifies identification.

The surest way to acquaint the general public with the names of plants is through illustrations. Is it not possible to have a cooperative system by which different states would be responsible for certain portions and thus distribute the cost of production as widely as possible? This would eliminate the duplication now current from the publication of similar material in different places and permit the use of first-class illustrations of uniform quality, as well as help to unify the names.

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FAUNAL CONDITIONS IN SOUTH GEORGIA ISLANDS

During a recent visit to the islands of South Georgia (latitude 54° south) a very curious faunal condition was noted, and as this is, perhaps, of biological interest, it may be well to state briefly the facts of the case.

South Georgia lies in the sub-Antarctic region a few hundred miles to the east of Cape Horn. The season is open for about three months, but quite rigorous the remainder of the year. The principal vegetation is tussock grass, and this at one time supported many rabbits and perhaps a few other species of mammals. A few decades ago, the whaling industry was started with South Georgia as a base of operations. To-day there are nine whaling stations on the large island, and in a good season of three or four months, several thousand whales are handled. The carcasses are allowed to drift along the beach, as soon as the outer coating of blubber has been removed.